

Claims

What is claimed is:

1. A mechanical stop adapted to be mounted onto a rigid bar comprising;
a single piece conically shaped body having a plurality of inwardly extending projections;

each of said inwardly extending projections having a distal end that is contoured to match an outer surface of the bar, said distal ends of said inwardly extending projections defining an opening;

said conically shaped body being adapted to be plastically deformed to a substantially flat shape after being placed onto the rigid bar, said opening having a first dimension prior to said conically shaped body being plastically deformed to a substantially flat shape and a second dimension after said conically shaped body has been plastically deformed to a substantially flat shape;

said first dimension being larger than the rigid bar, such that the rigid bar will fit within said opening prior to said conically shaped body being plastically deformed, and said second dimension being smaller than the rigid bar, such that after said conically shaped body is plastically deformed into a substantially flat shape, said distal ends of said inwardly extending projections will frictionally engage the outer surface of the rigid bar to secure said mechanical stop thereon.

2. The mechanical stop of claim 1 wherein said distal ends of said inwardly extending projections include a flange to provide more surface to surface contact between said mechanical stop and said rigid bar.

3. The mechanical stop of claim 2 wherein said flange extends axially from said distal ends of said inwardly extending projections such that said flange extends annularly around and parallel to the rigid bar when the rigid bar is inserted within said opening.

4. The mechanical stop of claim 1 wherein said conical body is substantially round and said distal ends of said inwardly extending projections are adapted to engage a substantially round rigid bar, said opening defining a first diameter prior to said conically shaped body being plastically deformed to a substantially flat shape and a second diameter after said conically shaped body has been plastically deformed to a substantially flat shape, said first diameter being larger than the rigid bar, thereby allowing the rigid bar to fit within said opening prior to said conically shaped body being plastically deformed, and said second diameter being smaller than the rigid bar, such that after said conically shaped body is plastically deformed into a substantially flat shape, said distal ends of said inwardly extending projections will frictionally engage the outer surface of the rigid bar to secure said mechanical stop thereon.

5. A method of mounting a mechanical stop onto a rigid bar comprising:
providing a rigid bar;

providing a first mechanical stop having a single piece conically shaped body with a plurality of inwardly extending projections, wherein each of the inwardly extending projections has a distal end that is contoured to match an outer surface of the rigid bar, the distal ends of the inwardly extending projections defining an opening that is larger than the rigid bar such that the rigid bar can be inserted within the opening;

placing the first mechanical stop onto the rigid bar by inserting the rigid bar through the opening within the mechanical stop;

plastically deforming the conically shaped body into a substantially flat shape such that the opening is reduced to a size that is smaller than the rigid bar, whereby the distal ends of the inwardly extending projections are forced into frictional engagement with the outer surface of the rigid bar.

6. The method of claim 5 wherein said distal ends of the inwardly extending projections include a flange extending therefrom to provide more surface area contact between the mechanical stop and the rigid bar.

7. The mechanical stop of claim 6 wherein said flange extends axially from said distal ends of said inwardly extending projections such that said flange extends annularly around and extends parallel to the rigid bar when the rigid bar is inserted within said opening.

8. The method of claim 5 further including:

providing a second mechanical stop having a single piece conically shaped body with a plurality of inwardly extending projections, wherein each of the inwardly extending projections has a distal end that is contoured to match an outer surface of the rigid bar, the distal ends of the inwardly extending projections defining an opening that is larger than the rigid bar such that the rigid bar can be inserted within the opening;

placing the second mechanical stop onto the rigid bar by inserting the rigid bar through the opening within the mechanical stop such that the distal ends of the inwardly extending projections of the first and second mechanical stops abut one another;

plastically deforming the conically shaped bodies of the first and second mechanical stops into a substantially flat shape such that the openings are reduced to a size that is smaller than the rigid bar, whereby the distal ends of the inwardly extending projections are forced into frictional engagement with the outer surface of the rigid bar, and the substantially flat mechanical stops are positioned adjacent one another on the rigid bar.

9. The method of claim 8 further including fastening the first and second mechanical stops to one another.

10. The method of claim 9 wherein fastening the first and second mechanical stops to one another includes welding the first and second mechanical stops to one another.

11. A stabilizer bar assembly for an automotive vehicle comprising:

a stabilizer bar;

a bushing mounted to said stabilizer bar;

a mechanical stop mounted onto said stabilizer bar adjacent said bushing and adapted to provide a stop to prevent said bushing from moving axially along said stabilizer bar;

said mechanical stop including a single piece conically shaped body having a plurality of inwardly extending projections, each of said inwardly extending projections having a distal end that is contoured to match an outer surface of said stabilizer bar, said distal ends of said inwardly extending projections defining an opening;

said conically shaped body being adapted to be plastically deformed to a substantially flat shape after being placed onto said stabilizer bar, said opening having a first diameter prior to said conically shaped body being plastically deformed to a substantially flat shape and a second diameter after said conically shaped body has been plastically deformed to a substantially flat shape;

said first diameter being larger than said stabilizer bar, such that said stabilizer bar will fit within said opening prior to said conically shaped body being plastically deformed, and said second diameter being smaller than said stabilizer bar, such that after said conically shaped body is plastically deformed into a substantially flat shape, said distal ends of said inwardly extending projections will frictionally engage said outer surface of said stabilizer bar to secure said mechanical stop thereon.

12. The stabilizer bar of claim 11 wherein said distal ends of said inwardly extending projections of said mechanical stop include a flange to provide more surface to surface contact between said mechanical stop and said stabilizer bar.

13. The stabilizer bar of claim 12 wherein said flange extends axially from said distal ends of said inwardly extending projections such that said flange extends annularly around and parallel to the stabilizer bar.